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DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Agency for Toxic Substances
and Disease Registry

Memorandum

Date . January 16, 1990

From Senior Toxicologist, HACA (E32)

Subject Health Consultation: Chevron Chemical Co./ORTHO (CCC/O) Site
Orlando, Florida

To Chuck Pietrosewicz
ATSDR Regional Representative
EPA Region IV
Through: Director, DHAC (E32)
Chief, ER, DHAC (E32)

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On December 14, 1989 a request was received from the Emergency Response Section, EPA Region IV, to review preliminary assessment screening information for the Chevron Chemical Company/ORTHO, Florida, site (CCC/O). The purpose of the review is to determine if the site poses a threat to public health.

Information Provided

1. Cover Memorandum, dated November 8, 1989 from L. Brannan, OSC, EPA, outlining EPA's request to ATSDR.
2. Analytical data for surface soils, subsurface soils, and ground water at the site with cover letter, dated August 22, 1989 from NUS Corporation to A.R. Hanke, Waste Management Division (WMD), EPA.
3. Study Plan, Screening Site Inspection, Phase II, for the Chevron Chemical Co./ORTHO site, dated May 24, 1989 prepared for EPA by the NUS Corporation.
4. Letter from NUS Corporation, dated January 31, 1989 to N. Kumar, WMD, EPA, detailing background information on the site and a recommendation for conducting a screening site inspection.
5. Photocopy of an aerial photograph of the site and surrounding off-site area.

Findings

A review of the information provided indicates that the CCC/O site was used by Chevron Chemical/Ortho as a chemical facility for blending pesticides and other crop sprays from 1950-1976 and was then sold to

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the Central Florida Mack Truck Company. The site is currently operated by Cargo Transport and Rental, Inc. as a public storage facility. Although the site is located in a predominantly industrial area, a residential area (trailer park) adjoins the northern border of the site. The site reportedly is poorly vegetated, portions of the site are known to flood on a recurring basis, and access to contaminated areas is not restricted.

The on-site surface soils, subsurface soils, and surface water are contaminated with a variety of pesticides, volatile organic compounds (VOC's), polycyclic aromatic hydrocarbons (PAH's), and metals; no off-site sampling data were provided. Many of the contaminants detected, particularly the pesticides and VOC's (e.g., alpha-BHC, gamma-BHC, aldrin, dieldrin, heptachlor, heptachlor epoxide, DDT, DDE, DDD, chlordane, and benzene) are probable or known human carcinogens and can also cause a variety of acute and chronic systemic toxicities, including neurotoxicity, hepatotoxicity, and hemotoxicity. These contaminants are absorbed by all exposure routes (ingestion, inhalation, dermal contact) and are all relatively volatile and mobile in the environment.

Conclusions

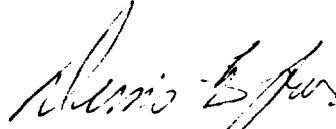
The contaminant levels detected in on-site surface soils and surface water at the CCC/O site are of public health concern, even for infrequent exposures of short duration. In addition, the information provided indicates a potential for off-site migration of contaminants as a result of volatilization, entrainment in airborne dusts, surface water runoff, and groundwater transport. Off-site drinking water supplies, sediments, and residential soils have not been evaluated for site-related contaminants. However, because of the contaminant levels detected in on-site surface soils, subsurface soils, and surface waters, the physical and chemical properties of these contaminants, the current on-site conditions, and the close proximity of a residential area to the site, the potential also exists for exposure of off-site residents to site-related contaminants at levels of public health concern.

Recommendations

Because of the public health threat posed by on-site contamination and the potential public health threat from possible off-site contaminant migration, ATSDR recommends the following:

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1. Restrict access to the site and/or mitigate the potential for direct contact with contaminated soils and surface water.
2. Sample off-site surface soil, sediments, surface water, groundwater, and air for site-related contaminants. This should include surface soil and air sampling of the adjacent residential area. Air sampling of residential areas for volatilized and dust-entrained contaminants is especially critical during any on-site remedial activities which disturb highly contaminated areas.
3. Further investigate area well use to ensure that groundwater is not used for potable purposes; if such use is found to exist, sampling of private wells is indicated.



Dennis E. Jones



DEPARTMENT OF HEALTH & HUMAN SERVICES

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Larry
Public Health Service
Agency for Toxic Substances
and Disease Registry

Memorandum

Date January 29, 1990

From Senior ATSDR Regional Representative

Subject Chevron Chemical Co./ORTHO;
Orlando, Florida

To Larry Brannen, OSC
EPA WMD Superfund Branch

thru Bob Jourdan, Chief
ERC Section
EPA WMD Superfund Branch

As requested, we have reviewed all of the currently available data and information on the above site. The focus of this review was for the public health threat implications posed by the presence of the reported compounds. It is our opinion that this site is of public health threat concern, even for short term exposures via a variety of exposure pathways. A copy of the review by Dr. Dennis Jones of our Division of Health Assessment and Consultation is attached for your information and use.

If we can assist further, please let me know.

Chuck Pietrosewicz

Chuck Pietrosewicz, C.H.W.S.

attachment: 1

cc: file
OAA/RS
FDHRS, Dr. Inman